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ABSTRACT

This final program performance report contains an eight-page narrative and supplementary materials from a competency-based vocational education (CBVE) staff development project. The narrative reports the project whose purpose was to promote curriculum-improvement activities as identified by teachers through a self-evaluation process with the end result being the development of competency-based materials and skills necessary to implement the materials. It summarizes these outcomes resulting from teacher participation in six workshops: fourteen teachers developed a better understanding of CBVE, engaged in self-evaluation of curriculum materials developed prior to the project to determine activities most in need of work, and developed products or plans of action to improve programs. These supplementary materials are appended: an example of a competency list: a competency learning guide form: self-evaluation form for curriculum improvement: assumptions, concepts, and principles pertaining to CBVE: transparency summary for the workshops: workshop activities: followup on self-evaluation, which looks at problem areas identified by the Department of Education in their evaluation of vocational-technical schools: and a bibliography. (YLB)

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COMPETENCY BASED VOCATIONAL EDUCATION STAFF DEVELOPMENT

(Contract # 85-9815)

By

Don Thomas

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

June 30, 1980

Pennsylvania Department of Education,

Bureau of Research and Evaluation

Research Coordinating Unit for

Vocational Education

CE 026 019

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FINAL

PROGRAM PERFORMANCE REPORT

Project # 85-9815

Greater Johnstown Area Vo-Tech School

Prepared by:
Don Thomas, Director of Curriculum
Research & Development

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I. Preface

The intent of this research effort was to determine which teachers would develop necessary skills and materials to serve as leaders in our expanded effort to institute Competency Based Vocational Educational Programs at the Greater Johnstown Area Vocational Technical School.

The project was divided into segments dealing with knowledge of CBVE, self-evaluation in relation to CBVE, and work to move down the CBVE continuum.

II. Introductory Section

Abstract

PA. 85-9815: Competency Based Vocational Education
Staff Development

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and Development
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$3,233.00
~~$3148.00~~ Federal

$1208.00 Non-Federal

July 1, 1979 - June 30, 1980

The purpose of the project was to engage in curriculum improvement activities as identified by individual teachers through a self-evaluation process with the end result being the development of competency based materials and the skills necessary to implement the materials.

Objectives

(General)

To utilize any available curriculum materials such as the V-TECS catalogs and work with lead teachers and administration in attempting to promote curriculum development activities as they relate to (CBVE) Competency Based Vocational Education.

(Specific)

1. Fourteen teachers will develop a working understanding of CBVE.
2. Fourteen teachers will engage in self-evaluation of curriculum materials developed prior to the project to determine activities in most need of work.
3. Each teacher will develop products or plan a course of action to deal with the weaknesses identified through the self-evaluation process.

Outcomes

The activities in the project were accomplished in workshops and resulted in:

1. A better understanding of CBVE as interpreted by the Administrative Staff.

2. Self evaluation of curriculum developed to date.

3. Setting of objectives to accomplish and develop products centered around the following activities designed to integrate CBVE/ideas into existing programs.

   a. scope of program
   b. utilization of follow-up information
   c. activities/materials (course guide)
   d. appendix (course guide)
   e. evaluation (course guide)
   f. competency learning guide
   g. advisory committees
   h. materials for disadvantaged
   i. special methods for working with handicapped

4. Work on the development of an instructional improvement plan.

Audience

All materials developed can be used by individual teachers and shared with the entire staff where they will serve as models for curriculum improvement.

Available Materials

Competency Lists (See appendix A)
Competency Learning Guides (See appendix B)
Self-evaluation Forms (See appendix C)
Final Report

BACKGROUND

Although we have been working to improve our curriculum development and delivery system for a number of years, there is one common, element that we found to be missing in a majority of the programs. The missing link is consistency, i.e., tying together competencies, objectives, activities, materials, evaluation, etc.

Activities initiated in our V-TECS implementation plan and our curriculum review meetings were able to be followed up in depth in the workshops as part of this project.

III. Methods

Objectives:

1. Fourteen teachers will develop a working understanding of CBVE.

2. Fourteen teachers will engage in self-evaluation of curriculum materials developed prior to the project to determine activities in most need of work.

3. Each teacher will develop products or plan a course of action to deal with the weaknesses identified through the self-evaluation process.

Procedures to achieve objectives

Workshop # 1 November 10, 1979 (5 hours)

1.1 Review of Video Tape and Slides re: CBVE

1.2 Handouts re: Elements of a CBVE System (See appendix D)

1.3 Review of literature re: CBVE (See appendix H)

1.4 Transparencies (See appendix E)

1.5 Continuous discussion and dialogue concerning development and delivery of CBVE and relativity to past curriculum development.

Workshop #2 January 12, 1980 (5 hours)

1.1 Review of workshop # 1

2.1 Self evaluation and identify activities to work on. (See appendix F)

Workshop #3 February 23, 1980

2.2 Self evluation related to Instructional Improvement Plan.

3.1 Work on activities identified through self evaluation and leading to a CBVE System.

3.2 Demonstrate examples and discuss utilization to value.

Workshop #4 March 15, 1980 (5 hours)

1.7 Discussion re: Content, delivery, evaluation and problems to deal with in CBVE System.

2.3 Follow-up on self evaluation by looking at problem areas identified by the DOE in their evaluation of Vo-Tech School (See appendix G)

3.3 Individual Work on activities

Workshop #5 April 26, 1980 (5 hours)

1.1 Review and discussion centered around self-evaluation and 2.4 strategies to get where we want to go.

3.4 Individual Curriculum Improvement Work

Workshop #6 & #7 June 3-4 1980 (5 hours)

3.5 Teachers worked on individual activities and responded to the following items listed on the agenda.

a. listing of activities worked on and products developed

b. listed activities in need of further study or development

c. list of activities completed in the project

d. activities to work on in 80-81

NOTE: For each workshop teachers indicated what they were going to accomplish and items were collected at the end of the session, reviewed, typed and returned.

IV. Analysis

The following analysis is made of the work accomplished and stated in light o objectives

Re: Objective #1 To develop a working understanding of CBVE.

A. Administration must develop a working philosophy re: CBVE and convey specifics to the staff.

B. Even if there is an understanding of the concept, programs lend themselves to different methods of delivering CBVE programs to the students.

C. Teachers find that they must take more time to think, plan, and organize their programs and that even with a well developed curriculum there are many classroom management skills to develop.

Re: Objective #2 To engage in self evaluation of curriculum to determine activities in need of development.

An Analysis of the self evaluation and problem area work sheet revealed the following:

A. There is a gap between the perceptions of the facilitator and the Staff as to what the needs really are. Staff members tend to think they have an item developed, however, after further questioning, they are not able to produce the documentation.

B. Many instructors do not readily accept some of the basic concepts of CBVE.

C. Majority of teachers are not where they want to be with their curriculum development activities.

Re: Objective #3 To develop products or a plan of action to deal with weaknesses identified through the self evaluation process.

A. Teachers have a tendency to start at the end of the CBVE process as opposed to the beginning.

B. Procedures from moving from material developed to new materials must be established to show that previous work can be utilized and provides the foundation for the CBVE system.

C. Generally speaking, the teachers with the least developed curriculum are the same ones that do not attend paid staff development sessions on a voluntary basis.

D. Just as teachers have difficulty trying to tie their curriculum together, they also have difficulty and need support and close supervision in moving from identified needs to strategies to resolve them.

V. Conclusions/Recommendations

In order for teachers to develop a working knowledge of CBVE the following is recommended:

A. That individual sessions with teachers be scheduled to insure an understanding and familiarization with the vocabulary, literature and elements.

Group sessions can be conducted to exchange ideas and obtain supportive feedback and ideas from the group.

Individual sessions must again be conducted to review and correct and misconceptions before they adversely affect the persons attitudes.

B. That field trips to competency based programs be taken and followed up with discussions relating practices seen to elements studied.

C. That teachers put thoughts and ideas on paper so facilitator doesn't make too many assumptions concerning their understanding.

That enough time be given to this activity. If it isn't individuals will not be able to really get into the development and utilization of CBVE materials.

To engage in self-evaluation and identification of strengths and weaknesses of current materials it is recommended that:

A. Good current practices are pointed out and with a knowledge of Competency Based Vocational Education teachers receive assurance that they can move down the line of the CBVE continuum by building upon current practices.

B. We work on a one-to-one basis with instructors to insure that there is no breakdown in communications.

C. We demonstrate the application of the concepts by having teachers visit successfully operated programs.

D. We continue to strike while the iron is hot and stress staff development activities.

To develop products and/or a plan of action to improve programs we must:

A. Make sure teachers realize the importance of the beginning components of the system such as the scope of the program.

B. Exchange information and build pride into the work of the instructor.

C. Incorporate curriculum development efforts into the evaluation system to reward the efforts of better teachers.

D. Offer close supervision and support so that instructors realize the seriousness of the intent of our work.

Recommendations for further research:

a. Study the end results of traditional vs. CBVE training trying to determine cost effectiveness of each.

b. Study the types of programs where CBVE works best.

c. Study the learning styles of students who appear to succeed in a CBVE program vs. those who don't.

d. Study CBVE programs for purposes of modifying the system so that more learning and teaching styles can be accommodated.

VI. Supplementary Materials.

A. Competency List (Automechanics - Example)

B. Competency Learning Guide

C. Self-Evaluation Form

D. Assumptions CBVE
Concepts CBVE
Principles CBVE

E. Transparency Summary

F. Activities

G. Problem Areas

H. Bibliography

A. EXAMPLE OF COMPETENCY LIST

GREATER JOI[illegible]WN AREA VOCATIONAL-TECHNICAL SCHOOL

STUDENT COMPETENCY RECORD

[illegible]dent _____ Program AUTO MECHANICS

[illegible]ve[illegible]

School Year	Date	Instructor(s)
		Frank Caldwell-1
		Stanley Harries -2
		James Pyle -3

[illegible]rf[illegible]mance Rating:

(4) Can perform with exceptional ability.
(3) Can perform without supervision.
(2) Can perform but requires some supervision.
(1) Cannot perform satisfactorily for participation in a work environment.
(0) Has not been introduced to the competency.

ITEMS	COMPETENCIES	LEVEL I					LEVEL II					LEVEL III				
		4	3	2	1	0	4	3	2	1	0	4	3	2	1	0
UNIT A																
1	Publications and manuals 1-2															
UNIT B																
1.	Customer relations															
a.	Work orders 1-2															
b.	Telephone use 1															
UNIT C	COOLING SYSTEMS															
1.	Check and correct coolant level 1-2															
2.	Replace and/or adjust belts 1-2															
3.	Inspect and replace hoses 1-2															
4.	Test and replace water pumps 3															
5.	Replace thermostats 2-3															
6.	Pressure check cooling system 1-2-3															

COMMENTS:

Student: _____

COMPETENCIES	LEVEL I					LEVEL II					LEVEL III				
	4	3	2	1	0	4	3	2	1	0	4	3	2	1	0
AUTOMOTIVE ELECTRICAL															
Batteries - Test and charge 1-2-3															
Batteries - Cable replace 1-2															
Use of electrical test equipment VAT 28 1-2-3															
Replace and adjust headlight 1-2-3															
Check and repair auto light system 2-3															
Remove, and replace starter 1-2-3															
Repair Starter 1-2-3															
Remove and replace alternator 1-3 2															
Repair Altenator 1-3 2															
ENGINE TUNE															
Service spark plugs 1-2-3															
Service distributor 1-2-3															
Perform engine tune-up 2-3															
Perform electeonic ignition system check. 2-3															
WHEELS AND TIRES															
Identify tire and rim type and size 1															
Use of impact tools 1-2															
Use torquing procedures 1-2															
Use of tire changer 1-2															
Check and adjust front wheel bearings 1-2-3															
R & R front and rear wheel studs 2															
Balance tire and wheel using bubble balance 1-2-3															
Balance wheels using on-car balances 1-3															
Balance tire using upright balances 3															
STEERING AND SUSPENSION															
Lubricate steering and suspension component 1-2															

ts:

Student: _____

COMPETENCIES	LEVEL I					LEVEL II					LEVEL III				
	4	3	2	1	0	4	3	2	1	0	4	3	2	1	0
Check and correct power steering fluid 1-2															
Overhaul power and ma ual steering box 3															
Check steering and fron suspension for repairs 1-2-3															
Replace tie rods 2															
Replace idler arms 2															
Check and replace shock absorbers 1-2															
Replace ball joints 2-3															
Front end alignment 2 3															
BRAKES															
Check pedal height and adjust 1-2-3															
Check and adjust parking brakes 1-2-3															
Check and replace brake shoes 1-2-3															
Check and replace disc pads 1-2-3															
Check and repair drums and rotors 1-2-3															
Check and repair wheel cylinders 1-2-3															
Check and repair calipers 1-2-3															
Bleed brakes -Power and Manual 1-2-3															
Overhaul/replace master cylinder 1-2-3															
Check power brake components 3															
ENGINE															
Change oil and filer 1-2															
R & R motor mounts 2															
R & R intake manifold 2															
R & R valve cover gaskets 1															
R & R head gaskets 2															

Student: _____

	CONTROL	LEVEL I 4 3 2 1 0	LEVEL II 1 2 3
	ENGINE (Continued)		
	Adjust valves -2-3		
	Check compression of cylinders 1-2-3		
	Check cylinder heads for trueness, and cracks 2-3		
	R & R valves 1-3	2	
	Grind valves and seats 2-3		
	Service rings and pistons 2	3	
	Check crankshaft and measure 2-3		
	R & R main and rod bearings 2-3		
	Check bearings using plastigauge 2-3		
	Replace cam shaft bearings 2-3		
	R & R cam shaft 2-3		
	R & R timing gears and chain 2-3		
	R & R oil pump 2		
	R & R engine assembly 2	3	
T J	FUEL AND EMISSION SYSTEM		
	Check and change air filter 1-	2	
	Check and replace fuel pump and lines 1-3	2	
	Check and adjust carburetor automatic choke idle speed and idle mixture 1-2-3	1-2-3	
	R & R Carburetor 1-2-3		
	Overhaul 2 barrel carb 2-3		
	Overhaul 4 barrel carb 3		
	Check and adjust emission components 1-3	2	
T K	DRIVE TRAIN		
	Check fluid levels 1-2		
	Service U joints 2	3	

Comments:

Page (4

Student: _____

	COMPETENCIES	LEVEL I 4 3 2 1 0	LEVEL II 4 3 2 1 0	4 3 2
	DRIVE TRAIN (Continued)			
	Check and adjust manual clutches 1-2-3			
	Remove examine and replace clutch 2-3			
	R & R rear axel bearings 2			
	R & R Std. Transmission and adjust linkage 2-3			
	Overhaul Std. Transmission 3 2			
	R & R and adjust and linkage A/Transmission 2-3			
	Check and adjust A/Transmission 2-3			
	R & R A/transmission 2-3			
	Overhaul A/transmission 3			
	Adjust and repair overdrive units 3			
	EXHAUST SYSTEMS			
	R & R exhaust manifolds 2-3			
	R & R Exhaust pipes and mufflers 1-2-3			
	STATE INSPECTION			
	Body items 2-3			
	Brakes 2-3			
	Front End 2-3			
	Lights, wiper, horn exhaust 2-3			

Comments:

B. COMPETENCY LEARNING GUIDE

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

Competency Learning Guide

for

_____

UNIT/DUTY

COMPETENCY:

PURPOSE:

COMMENTS:

Date Started _____

Date Completed and Noted on Competency Check List _____

_____ Student

_____ Teacher

Competency Learning Guide

PERFORMANCE OBJECTIVE

ACTIVITIES:

DT:jad
11-9-79

Competency Learning Guide

EVALUATION:

STUDENTS: Please list questions that need to be answered in order to complete the competency.

C. Self Evaluation Form

Vocational Teachers

Self Evaluation

for

Curriculum Improvement

Based on a scale of 1 to 10, rate the following statements concerning your curriculum development activivies.

(Inadequate) -Low- 1 2 3 4 5 6 7 (Appropriate) -High- 8 9 10

1. To what extent does your course description reflect the scope of your program - example of a good description is attached for your comparison. 1 2 3 4 5 6 7 8 9 10

   A. Can students/parents read and understand the scope of your course? Yes _____ No _____

2. To what extent is the content of your program based upon competencies as required for the job titles identified in the D.O.T.? 1 2 3 4 5 6 7 8 9 10

   A. Has your advisory committee validated the competencies? Yes _____ No _____

   B. Are the competencies directly tied into activities and materials in the course guide? Yes _____ No _____

3. Concerning CBVE ..... indicate whether or not you agree or disagree with the following statements and then indicate if you apply the concept in your shop.

24

25

CONCEPTS	Agree with concept		Concept is applied in shop		Comments Use back
	Yes	No	Yes	No	
A. Students should progress through the program at their own rate.					
B. Students should use a variety of modes and media by					

Self Evaluation (Continued)

CONCEPT	Agree with Concept		Concept is applied in my shop		Comments
	Yes	No	Yes	No	
C. Subject matter of the program is based on an analysis of the competencies to be learned.	___	___	___	___	
D. Each student is given individual attention by the instructor.	___	___	___	___	
E. Students are given immediate feedback on how well they are doing.	___	___	___	___	
F. Students must demonstrate mastery of each competency.	___	___	___	___	
G. Evaluation of the student is based on observed performance of each competency.	___	___	___	___	
H. Evaluation criteria are made known to students.	___	___	___	___	
I. The program is individualized, with students working as individuals or in small groups rather than as a total class.	___	___	___	___	
J. The emphasis is on exit requirements, rather than entry requirements.	___	___	___	___	
K. Students should use instructional learning activity packages.	___	___	___	___	
L. There is continual feedback to the student as to his/her progress and achievement of the competencies.	___	___	___	___	

Self Evaluation (Continued)

4. Curriculum Improvement Efforts 1979-1980

Rate your efforts to improve your curriculum as it relates to the following activities:	Yes	No	Comments
A. Attend CBVE Staff Development Sessions	___	___	
B. Act as a catalyst to pull together ideas from curriculum resources such as V-TECS materials.	___	___	
C. Request meetings with Administrative Staff to discuss curriculum development activities.	___	___	
D. Conduct Advisory Committee meetings designed to improve curriculum	___	___	
E. Follow-up graduates or talk to Co-op students to get feed back re: the program	___	___	
F. Attend Professional Association meetings in your area to keep current in happenings in field.	___	___	
G. Is there a discrepancy between the curriculum as described in your course guide and what happens in the shop?	___	___	
H. Are you where you want to be with your curriculum?	___	___	

HEALTH ASSISTANT CURRICULUM

The curriculum entitled Health Assistant is designed to prepare an
=y worker in a variety of health occupations. As an entry level worker
:r she serves as an assistant in many areas, always working under the
:ervision of a professional. The assistant performs simple tasks assigned
:he nurse or other health facility workers, assists physicians and/or
:tists in their offices and performs simple laboratory procedures. He or
: might assist in the care of the ill or convalescent persons in the home
:andle clerical duties in health care facilities. The curriculum, which
given at the high school level, provides learning experiences through
:h the student will master skills, acquire knowledge and attitudes needed
perform effectively at the assistant level.

D. ASSUMPTION, CBVE

CONCEPTS, CBVE

PRINCIPLES, CBVE

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

Assumptions Underlying Competency-Based Education

CBE does not differ from other modes of education in its goals. Instead, [illegible] is unique in terms of its underlying assumptions and the approaches that characterize it. There are several aspects of CBE that distinguish it from traditional instruction. Although each of these aspects may be found in some conventional curricula, it is their collective use that constitutes a truly competency based program. CBE has been variously described by authors (e.g., Elam, 1971; Finch and Hamilton, 1974; Clark,1973) as focusing on several key areas. These areas include the nature of competencies, criteria used to asses the competencies, ways that student competence is assessed, student progress through the program, and the program's instructional intent.

COMPETENCIES

At the core of CBE is competency. It reflects the ability to do something in contrast with more traditional ability to demonstrate knowledge. Specifically, competencies for vocational and technical education are those tasks, skills, attitudes, values, and appreciations that are deemed critical to successful employment. Just because something is performed by a worker does not mean that it is automatically classed as a competency. The worker must, in fact, find this competency to be a critical aspect of employability in the occupation. Each competency, then, evolves from explicit statements of worker roles; and, since competencies align so closely with the occupation, student competence is ultimately assessed in much the same way as that of a worker. In order to ensure that assessment will be fair to the student, all competencies are detailed and made available for anyone to examine.

CRITERIA

In the assessment of student competence, it is not enough to merely call for a global exhibition of performance. The teacher must also have available those specific criteria which clarify each competency. For example, it might be that each student in a particular curriculum should be able to complete a job application form. In order to judge student competence in this area accurately, one must know what standards the completed form should meet as well as the conditions under which it should be filled out. Criteria associated with each competency have to reflect both the level of acceptable performance and the conditions associated with this performance. As with competencies, criteria are also made available to each student so there is no question as to what constitutes mastery.

ASSESSMENT OF COMPETENCE.

When student competence is being assessed, primary consideration should be given to application. Although it may not be possible for all vocational students to be assessed as they perform in actual work settings, this is the ultimate evaluation environment one should strive for, since it is the most realistic. Even though it may not be possible to assess competency on the job, each student should be evaluated as objectively as possible using the most realistic applied standards available. Unlike some traditional instructional modes, student competence and not grading provides the primary evidence of achievement. Consequently, instructional staff are required to move beyond the traditional knowledge type measures such as multiple-choice and essay examinations and focus on assessment that aligns with worker competence in the real world.

STUDENT PROGRESS

A curriculum is typically divided into clearly identifiable time frames such as years, quarters, terms, semesters, and weeks. These serve as starting and ending points for various portions of the instruction and enable an instructor to say that students have completed a certain phase of the curriculum. In fact, students do not always achieve at the same rate. Abilities such as reading, mathematics, and verbal comprehension vary greatly among vocational students and a time-based curriculum cannot take this wide variance into account to the extent that any instructor would like. In contrast with a time-based mode, competency-based education uses demonstrated competence as a determiner of student progress toward program completion. This enables students to proceed through a program at their own particular rates, based upon their individual abilities, and thus master specified competencies in a shorter (or longer) time period.

INSTRUCTIONAL INTENT

The explicit intent of competency-based education is to facilitate student achievement of competencies specified in the program. Each instructor is obligated to provide a sufficient variety of learning experiences so that students will be afforded an opportunity to master a minimum set of competencies; and, in effect, the instructor may be held accountable for student achievement. If it is indicated that each student should be able to prepare a résumè which meets certain specific criteria, the instructor cannot just provide basic information on this area and assume that all the learners will be able to perform the task. The instructor is obligated to make available to students those experiences which facilitate the development of résumè writing skills. This might include the use of role playing and other simulation activities, outside resource persons, and other techniques that enhance and aid each student's attainment of competence.

DT:jad
11-5-79

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

Concepts C B V E

Introduction:

There are a number of current concepts of education about which much is being written, and about which much discussion is taking place. It might be helpful in this examination of competency-based vocational instruction to review these concepts. Do you, as a vocational administrator basically agree with the following statements, or do you disagree with them?

	AGREE	DISAGREE
1. Students should be able to enter the vocational program when they need to do so.		
2. Students progress through the program at their own rate.		
3. Students may use a variety of modes and media by which to learn.		
4. Subject matter of the program is based on an analysis of the skills to be learned.		
5. Learning activities lead directly to mastery of required skills.		
6. Each student is given individual attention by the instructor.		
7. Students are given immediate feedback on how well they are doing.		
8. Students must demonstrate mastery of each task.		
9. Evaluation of the student is based on observed performance of each task.		
10. Evaluation criteria are made known to students.		
11. Students are able to repeat learning activities if they need to.		
12. Credit is given for work accomplished.		
13. Students leave the instructional program when they have completed it.		
14. There is a systematic approach to curriculum development.		
15. There is efficient year-round use of instructional facilities.		

BASIC PRINCIPLES

of

C B V E

1. The program is individualized, with students working as individuals or in small groups rather than as a total class. There may be no classes at all.

2. The program is organized for open entry/open exit. Students can enter the program when they are ready, and leave when they have achieved the necessary skills. This is not always possible in secondary programs, of course.

3. The emphasis is on exit requirements, rather then entry requirements.

4. Students will be busy using instructional modules or learning activity packages. The materials will be fully tested and validated as to their effectiveness in delivering instruction.

5. There is continual feedback to the student as to his/her progress and achievement of the competencies.

6. The results of the instructional program in terms of helping students achieve the competencies are fed back into the system and are used to improve the program.

DT:jad
10-10-79

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

Course Title: _____ Page ( ) of ( )

MAJOR UNITS Course Guide	COMPETENCIES	OBJECTIVES	ACTIVITIES	INSTRUCTIONAL TEACHING AIDS	HOW EVALUATED
DUTIES V-TECS	TASKS	PERF. OBJ.	PERF. GUIDE	NOT LISTED IN V-TECS	CRITERIA
	Do we need to reflect learning difficulties EASY → V. DIFFICULT	This is the terminal performance objective.	What learning steps are needed to acheive the desired outcome. Since our competencies are of the major variety - learning steps will involve activities to acheive the smaller components of the competency as well.	Each step requires a lesson plan. The lesson plan will include handouts A-V materials etc. These plans can be in the form of learning packages (instructional modules)	As specific as possible.

E. TRANSPARENCY SUMMARY

CBVE TRANSPARENCY SUMMARY

TRANSPARENCY #1

The Competency Based Instructional Program

1. is designed to help students achieve the specified competencies.
2. provides for a variety of student learning styles range of student abilities

TRANSPARENCY #2

The Competencies Students Are To Demonstrate

1. are derived from an analysis of tasks performed by incumbent workers.
2. are stated so as to permit assessment of student performance.
3. are explained to students in advance of instruction.

TRANSPARENCY # 3

Characteristics of Competency-Based Vocational Education

1. instruction is individualized and personalized.
2. the learning experience of the individual is guided by feedback.
3. the program as a whole is systematic
4. emphasis is on exit, not entrance requirements.
5. instruction is modularized.
6. the sudent is held accountable for performance.

TRANSPARENCY # 4

Conventional Vocational Programs	Competency-Based Vocational Programs
1. Content based	Competency based
2. Time based	Performance based
3. Group paced	Individually paced
4. Group needs	Individual needs
5. Delayed feedback	Immediate feedback
6. Textbook/workbook materials	Modules and media materials
7. Limited Field experience	Learning in the field

TRANSPARENCY - SUMMARY (Continued)

Conventional Vocational Programs	Competency Based Vocational Programs
8. Lectures, demonstrations	Assistance of resource person
9. General objectives	Specific objectives
10. Subjective criteria	Objective criteria
11. Norm referenced	Criterion referenced.
12. Final Grades	Student Competence

TRANSPARENCY #5

Planning For Competency Based Vocational Instruction

Identify Occupational Competencies

1. Use the V-Tecs Catalogs
2. Locate Other Task Analyses
3. Conduct Your Own Task Analysis
4. Utilize a committee
5. Utilize the Local Advisory Committee

Obtain CBI Instructional Materials

Locate Materials Produced in Other School Systems
Locate Commercial Materials
Organize a State Curriculum Center to Develop Materials
Have Your Teachers Produce Their Own CBI materials

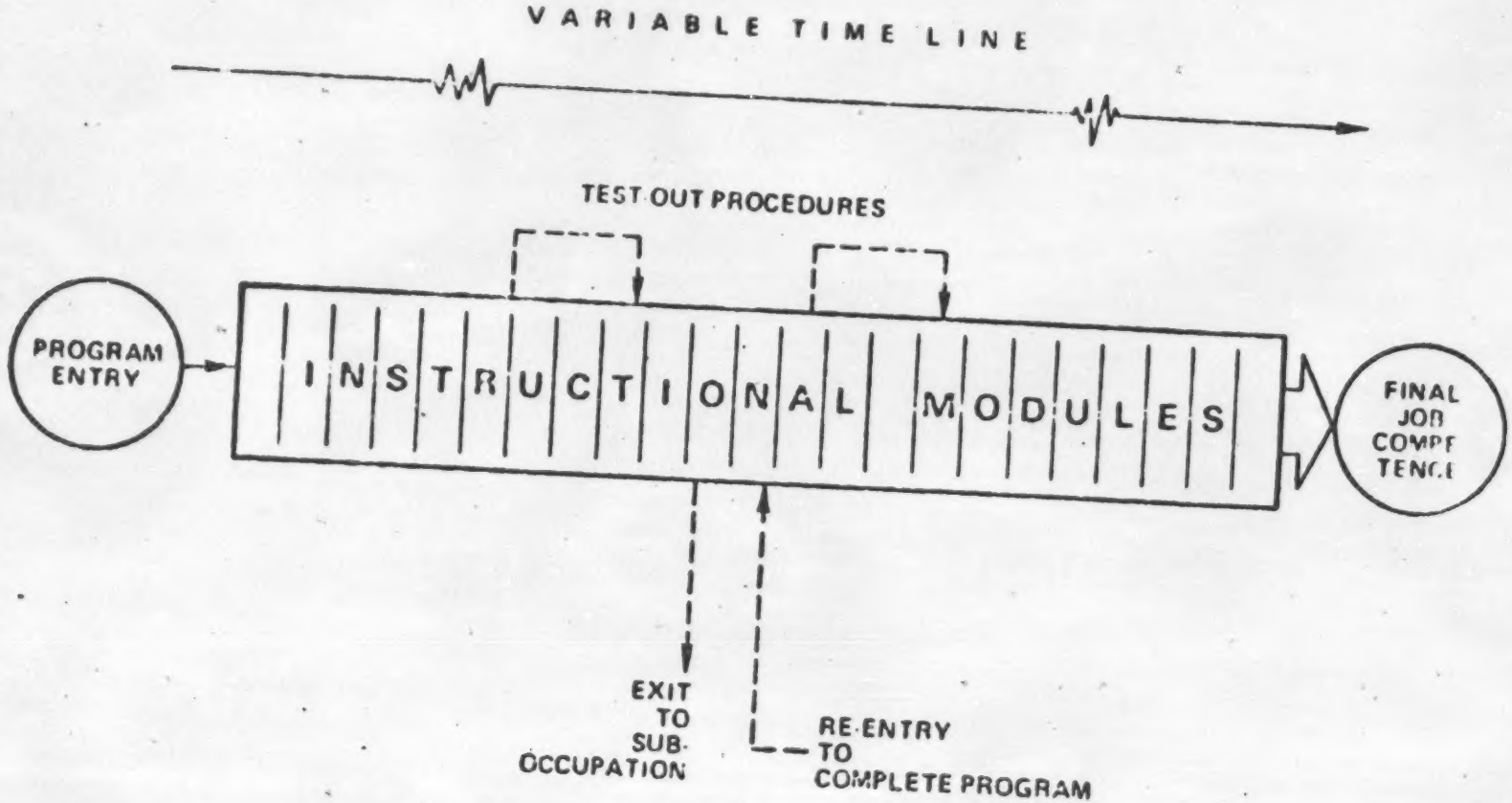
Train Teachers to Manage the CBI Programs.

Conduct Training Workshops
Use Teacher Training Modules
Supervise Teachers Performance

TRANSPARENCY # 6 (See Attachment)

jad
6-16-80

MODEL OF COMPETENCY-BASED VOCATIONAL PROGRAM



426 #

TRANSPARENCY - SUMMARY (Continued)

TRANSPARENCY # 7

Implementing Competency Based Instruction

Orient New Students
Inform School Faculty
Inform Parents and Community
Gain Approval of School System Decision Makers on the Mechanics of the Program

Maintain a Student Progress Record Keeping System

Use Simple Adaptations of Present System
Develop New Manual System
Install Computer-Based Management System Using Deveoped Program

Provide Special Facilities for CBI

Utilize Present Facilites
Update Present Labs and Classrooms
Remodel Vocational Areas

Award Grades and Credentials

Adapt Traditional Grading Sytem to CBI
Adopt "Pass" "No Credit" System
Provide Competency Transcript

TRANSPARENCY #8

Evaluating Student and Program Performance

Use V-TECS Catalogs Criteron Referenced Measures
Use Teacher - Produced Checklists and Rating Sheets
Supervise Teacher Performance in Evaluation

Evaluate the CBI Program

Use Informal Data From Teachers Record of Student Achievement
Set up Computer Based Evaluation System Using Developed Programs

TRANSPARENCY - SUMMARY (Continued)

TRANSPARENCY #9

Students Rate of Progress Through the CBI Program

Is Determined by Demonstrated Competency rather than by time or course Completion.
May Vary With Individual Students Characteristics

TRANSPARENCY #10

Assessment of Student Competency

Uses Student Performance As the Primary Evidence of Competence
Strives For Objectivity
Takes Place When the Student is Prepared For Assessment
Is Used As Feedback For Program Refinement.

TRANSPARENCY #11

The Measures Used to Assess Student Achievement of Competencies

Are Based Upon the Specified Competencies
Are Explicit in Stating Expected Levels of Mastery and Conditions
Are Explained to Students in Advance of Assessment.

TRANSPARENCY #12

Purpose of Job Skill Competency Check List

1. Evaluation of Students
2. Program Accountability
3. Co-op Placement Activities
4. Curriculum Modification
5. Continuity
   - Teacher-Teacher
   - Secondary- Adult Education

TRANSPARENCIES #13-#15 Attached.

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6-18-80

#13

STUDENT COMPETENCY RECORD

STUDENT _____ PROGRAM _____

LEVEL	SCHOOL YEAR	DATE	INSTRUCTOR (S)
I.			
II.			
III.			

PERFORMANCE RATING:

(4) CAN PERFORM WITH EXCEPTIONAL ABILITY.
(3) CAN PERFORM WITHOUT SUPERVISION.
(2) CAN PERFORM BUT REQUIRES SOME SUPERVISION.
(1) CANNOT PERFORM SATISFACTORILY FOR PARTICIPATION IN A WORK ENVIRONMENT.
(0) HAS NOT BEEN INTRODUCED TO THE COMPETENCY.

ITEMS	COMPETENCIES	LEVEL I					LEVEL II					LEVEL III				
		4	3	2	1	0	4	3	2	1	0	4	3	2	1	0

#14

COURSE TITLE TROWEL TRADES PAGE (1) OF (10)

MAJOR UNITS	APPROX CLOCK HRS	COMPETENCIES	OBJECTIVES	ACTIVITIES	INSTRUCTIONAL TEACHING AIDS	HOW EVALUATED
EXAMPLE: BLOCKWORK	120	LAYOUT AND CONSTRUCT A BLOCK RETURN CORNER	1. TO HAVE THE STUDENTS DEVELOP KNOWLEDGE OF BLOCK CONSTRUCTION	1.1 LAYOUT, SQUARE AND BUILD A RETURN CORNER WITH 6" BLOCK RAKED 6 COURSES HIGH	1.1.1. REFERENCE BOOK #5 1.1.2. HANDOUT SHEET #16 1.1.3. SLIDE #9	1.1.1.1 STUDENTS & INSTRUCTOR WILL EVALUATE BASED ON SPEED, ACCURACY & WORKMANSHIP
WHAT COURSES MAKE UP PROGRAM WHAT UNITS MAKE UP THE COURSES	HOW MUCH THEORY & LAB TIME IS TO BE BUDGETED.	WHAT TASKS SHOULD THE STUDENT BE ABLE TO PERFORM	WHAT IS THE PURPOSE OR RATIONAL FOR THE COMPETENCY	WHAT LEARNING ACTIVITIES ARE NEEDED TO ACCOMPLISH THE OBJECTIVES - PURPOSE	WHAT RESOURSES ARE NEEDED (TIE IN WITH BUDGET PLANNING)	HOW DO WE KNOW WHETHER OR NOT A STUDENT HAS ACHIEVED THE COMPETENCY

QUESTIONS TO CONSIDER WHEN DEVELOPING THE COURSE GUIDE

#15

PROGRAM REVIEW OF CURRICULUM DEVELOPMENT AND RELATED CONCERNS

PROGRAM _____

INSTRUCTOR(S) _____

	APPROPRIATE	NEEDS DEVELOPING	N/A
I. COURSE SYLLABUS			
BASIC INTRODUCTION			
DESCRIPTION			
GENERAL OBJECTIVES			
JOBS GRADUATES QUALIFY FOR			
OUTLINE			
TEXTS			
REFERENCE			
GRADING (BASIS)			
II. COURSE GUIDE			
COMPETENCIES OBJECTIVES (PURPOSE)			
LEARNING ACTIVITIES			
RESOURSE MATERIALS			
EVALUATION			
APPENDIX			
III. REVISIONS MADE	YES	NO	N/A
IV. PLACEMENT	GOOD	FAIR	POOR
V. ENROLLMENT			
VI. ADVISORY COMMITTEE MEETINGS			

COMMENTS:

F. ACTIVITIES

To: Don Thomas

From: _____

Topic: Staff Development Workshop, January 12, 1980

Date: January 11, 1980

I will work to accomplish as many activities in my priority listing as possible during this day. The product of my efforts will be handed in at the end of the session to demonstrate my progress:

Priority	ACTIVITIES	Anticipated Product
	Scope of Program (Utilization of Follow-up Information)	
	Competency list	
	Course Guide (Activities/Materials)	
	Course Guide (Appendix)	
	Course Guide (Evaluation)	
	Competency Learning Guide	
	Advisory Committee	
	Identify $50.00 worth of curriculum reference or resource materials.	
	Identify reading/math materials for disadvantaged.	
	Activities for handicapped(mainstreamed students)	
	Other	

RECEIVED
Vo-Tech Curriculum Office

What materials will you bring with you to the session?

What resources do you want me to have available for you?

* Identify one, two or three activities - you don't have to prioritize the entire list.

DT:jad

1-9-80

G. PROBLEM AREAS

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

Staff Development Workshop

March 15, 1980

Agenda

1. Discussion centered around curriculum development practices in your area dealing with content, delivery or evaluation.

2. Below you will find a listing of Problem Areas that have been identified by the Department of Education in their evaluation of the Vocational-Technical Schools and through our own evaluation and review of curriculum activities. They may or may not apply to you.

At the workshop you can indicate whether the items are a problem or not as they relate to your program. We will then take items that are problems and work on them today.

You will be either developing strategies to resolve the problem or actually working on materials to eliminate the problem.

Problem Areas

Yes	No	
—	—	1. Leadership skills and attitudinal development are not integrated in the curriculum and the student organization is not incorporated in the teaching methods.
—	—	2. Student career objectives and follow-up of graduates need attention.
—	—	3. Craft advisory committees need to assist in the validity and development of competencies.
—	—	4. Performance objectives (CBVE) need to be more appropriately used in the educational instructional process and competency learning guides must be developed to improve upon the delivery of the program.
—	—	5. Curriculums need to be designed and more individualized instruction to accommodate the disadvantaged and handicapped.

GREATER JOHNSTOWN AREA VOCATIONAL TECHNICAL SCHOOL

Staff Development Workshop

Agenda (Continued)

Yes	No	Problem Areas
___	___	6. Attention needs to be given to the quantity and quality of instruction to students while on the job. (Coop-Ed.)
___	___	7. Annual follow-up studies of vocational graduates are essential and needed in order to get specific feedback into the curriculum.
___	___	8. Need to engage in self-evaluation activities.

The attached information will be of interest to you if you are concerned about self-evaluation.

I plan to develop strategies or engage in activities as they relate to item(s) _____ above or other areas as indicated below.

_____ Date

_____ Signature

DT:jad
3-13-80

H. BIBLIOGRAPHY
(Review of Literature)

H. Bibliography:

1. Competency-Based Education, an Introduction. Burns, Richard W. and Joe Lars Klingstedt, Educational Technology Publications, 140 Sylvan Avenue, Englewood Cliffs, NJ 07632. 1972

2. Competency Based Learning: Technology, Management and Design. Davies, Ivor K., McGraw-Hill Book Company, New York, NY

3. Developing Audio-Visual Instructional Modules for Vocational and Technical Training. Bell, Norman T. and Allan J. Abedor, Educational Technology Publications, 140 Sylvan Avenue, Englewood Cliffs, N.J.

4. Developing Individualized Instructional Material, A Self-Instructional Material in Itself. Johnson, Stuart R. and Johnson, Rita B. Westinghouse Learning Press, 2680 Hanover Street, Palo Alto, CA 94304

5. Developing Vocational Instruction. Mager, Robert F. and Beach, Kenneth M., Fearon Publishers, Inc., Belmont CA

6. Guide to Systematic Instructional Design. Wong, Martin R. and Raulerson, John D., Educational Technology Publications, 140 Sylvan Avenue, Engliewood Cliffs, NJ 07632 1974

7. Handbook for Managing Individualized Learning in the Classroom. Champagne, David W. and Richard M. Goldman, Educational Technology Publications, 140 Sylvan Avenue, Englewood Cliffs, NJ 07632 1975

8. Handbook of Curriculum Design for Individualized Instruction, A Systems Approach. Drumheller, Sidney H. Educational Technology Publications, 140 Sylvan Avenue, Englewood Cliffs, NJ 07632 1971

9. How to Build Modules and Learning Packets. Weldon, Ward, Instructional Media Incorporated, 8141 East 44th Street Tulsa OK 74145

10. Individualizing Vocational and Technical Instruction. Pucel, David J. and Knaak, William C., Charles E. Merrill Publishing Company, Bell & Howell Company, Columbus OH. 1975.

11. Preparing and Using Individualized Learning Packages for Ungraded Continuous Progress Education. Kapfer, Philip G. and Ovard, Glen F., Educational Technology Publications, 140 Sylvan Avenue, Englewood, NJ 07632. 1971

12. Curriculum Development in Vocational and Technical Education, Planning Content and Implementation. Finch, Curtis and Crunkelton, Allyn & Bacon, Rockleigh, NJ 07647

H. Bibliography (Continued)

13. Staff Development and Instructional Improvement, Plans & Procedures. Bishop, Leslie J., Allyn and Bacon, Rockleigh, N.J. 07647

14. Administrator's Guide to an Individualized Performance Results Curriculum. Stradley, William, Center for Applied Research in Education, 521 Fifth Avenue, NY, NY 10017.

15. Methods for Educating the Handicapped: An Individualized Education Program Approach. Poplin, George & Inez, Allyn & Bacon, Rockleigh, NJ

Microfiche

Competency Assessment, Research and Evaluation. (Report of a National Conference, University of Houston). American Association of Colleges for Teacher Education, Suite 610, One Dupont Circle, Washington, DC 20036. ED 102 162

Competency Based Education Sourcebook. Northwest Regional Educational Laboratory, 710 Southwest Second Avenue, Portland, OR 97204. ED 147 952

Competency Based Route to Vertical Curriculum Articulation. Curriculum Articulation Project, 145 Peek Hall, University of Minnesota, Minneapolis, MN 55455. ED 137 515

Competency Based Workshop on Designing Learning Systems for the West Virginia Department of Education, Division of Instructional LearningSystems Staff. West Virginia Department of Education, Bureau of Learning Systems, Division of Instructional Learning Systems, Charleston, WV 25305. ED 143 659

Guide for the Development of Curriculum in Vocational and Technical Education. Division of Vocational Education, University of California, Los Angeleles, CA ED 037 535

Procedures for Constructing and Using Task Inventories. Research and Development Series #91. Melching, William H. and Sidney Boncher, National Center for Research in Vocational Education, Ohio State University, 1960 Kenny Road, Columbus, OH 43210. ED 105 093

Vocational Educator's Guide to Competency Based Personalized Instruction. Minnesota State Department of Education, Division of Vocational Education, St. Paul, MN. ED 150 279.